

Miriam Elbaz

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- P.hD. in computer science majoring in AI, SER, and prosody
- M.SC computational biology research student majoring in data science and machine learning.
- Involved in a few papers focusing on machine learning, data science, math modeling and biology.
- Analytical and problem-solving skills, and a team player.

Employment:

2023-current: **Lecturer** , HIT

teaching and managing the course intro to programming in python for students in the program of digital technology in medicine. This course imparts a broad understanding of basic concepts in computer science and programming

Education

2023-current: **P.hD. in computer science**, Weizmann institute of science

My research focuses on AI explainability and interpretability when the main interest is to understand prosody and emotions in audio and speech data. The tools we use come from the world of AI and LLMs together with the speech and prosody field

2019 -2022: **M.Sc. in computational and systems biology**, Weizmann Institute of Science

I've completed my masters in the systems immunology department at Prof. Ido Amit's lab.

The role I play as a **computational biologist** is **data science**, dealing with immunogenomics **high throughput data** obtained from scRNA-seq methods. Using different tools from **statistics** to the **machine learning** world, I try to answer important questions with the aim of understanding and developing immunotherapies.

Thesis: Spatial and Temporal Mapping of Immune Cell Dynamics in Breast Cancer Metastasis

2016-2019: **B.Sc. in Bioinformatics** – Jerusalem College of Technology, Jerusalem, Israel

Research Experience & Projects

2018 - 2020: **Research Assistant in the Dept. of Mathematics**— Jerusalem College of Technology.

Developing mathematical models of cancer immunotherapy (5 published papers).

2019 - 2020: **Project in the Dept. of Bioinformatics**— Jerusalem College of Technology & Tel Ha-Shomer

investigated the connection between chemicals and fertility using **statistics & machine learning**.

2018 - 2019: **Research Assistant in the Dept. of Bioinformatics**- Jerusalem College of Technology.

focusing on building a comprehensive **numeric model** of retinal neuron **networks** using **Python & neuroConstruct**.

Skills & Abilities

- Familiar with: R, Python, Matlab, Java, C++, C#, sql, Linux.
- Skills: data science, machine learning, bioinformatics.
- Editing: LaTeX, overleaf, illustrator.

Honor & Awards

Jun 2018: **Hackathon Winner** - Second place winner at HackTal hackathon organized by LevTech challenge given by intel. Won for developing a technological dark escape room, suitable also for blind people.

2016 - 2019: **Scholarship for Research Excellence** - Jerusalem College of Technology

Publications

Throughout my studies I've published 8 papers in different scientific journals:

focusing on mathematics / computer science applied to biological problems. can be found here: [Google Scholar](#)

Conferences :

November 2021: Artificial immune system features for machine learning applications.

The 3rd International Conference on Machine Learning and Intelligent Systems (MLIS2021).

November 2019: NeuroConstruct-based implementation of Retinal Circuitry.

Advances in Computational Biology Conference Fostering Collaboration among Women Scientists.

Languages

Hebrew- native, **English**- proficient, **French**- limited proficiency.

Volunteer Experience

2019- present: **Counselor** - kids of courage organization. Summer camp for children with physical disabilities.